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Library Instruction and Student Engagement in the Age of Google

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Introduction

A typical library instruction session includes demonstrations of how to use the library catalog, how to access information via library-provided electronic resources, and how to use the electronic journal list. Given limited time with a new group of students, many librarians would not opt to include instruction on how to effectively and efficiently use a search engine. However, introducing a library lesson with a search engine such as Google can help motivate students and offers an opportunity for the instructor to build on the students' prior knowledge and research experiences more quickly and efficiently.

A member of the teaching faculty—hoping for better papers than his students produced last semester—brings a class to the library for instruction; a well-meaning librarian proceeds to show them the merits of library resources such as specialized reference books or subject-specific databases. Sometimes these demonstrations are engaging and helpful but often they only elicit yawns from the students. Perhaps some of them believe that they are already expert searchers; others may have already determined that they will not be spending much time on the current project anyway. Many of us have experienced these less-than-stellar instruction sessions. In an effort to do something about them, we are now ready to focus on how we might best engage our students at their level of knowledge and interest.

Student Engagement

What is student engagement? Student engagement is one of those terms with many meanings depending on the context. It has been described as "the student's psychological investment in and effort directed toward learning, understanding, or mastering the knowledge, skills, or crafts that academic work is intended to promote" (Newman, p. 12). We are speaking of those moments in an instruction session when they make eye contact, nod in agreement, are

following along as you demonstrate a search, ask a question, or respond to a question you have posed.

Our Charge

Librarians would do well to take the role of information and technology leaders among these students. Many educators will agree that the online world is becoming increasingly complex, that students need help deciphering what they find there, and that they need help in learning how to make decisions about the quality of that information. Librarians could easily fill this need by positioning themselves as "guides on the side" while students demonstrate their searching prowess even though such skills may be weak, misguided, or overly simplistic.

In order to fill this need effectively, librarians should consider the social nature of learning in today's networked society and realize that this framework could be utilized in the classroom as well. While this does not mean that direct instruction or teacher-led activities are extinct, it does mean that we need to teach at the intersection of students' prior knowledge and the critical place where library resources fill the gaps created by keyword-searching engines.

Why Start with the Web?

The 2006 OCLC report *College Students' Perceptions of Libraries and Information Resources* indicates "that 89 percent of college student information searches begin with a search engine" (OCLC, pt. 1, p. 7). Why not start where they start? Librarians should consider beginning their library instruction sessions at the place where their students would begin—with Google. Using Google as an entryway into discussion of the merits of library-provided electronic resources may very well be the easiest method of integrating students' existing knowledge of the open web with less-familiar but often more authoritative sources found in library-provided electronic resources.

Activating Prior Knowledge

Lessons which begin by briefly evaluating a student's prior knowledge also make good pedagogical sense. Students naturally feel more confident and eager to learn something new when it appears that the topic is familiar. Activating prior knowledge also prepares the mind to integrate new knowledge and concepts. Using Google to help students connect new knowledge to old also helps them build sequences of memories that associate library searching with their previously 'easy' and 'enjoyable' search engine experiences. Lessons which extend student understanding of a familiar concept help to create better student searchers.

One such strategy, creation of a KWL chart, may help students focus on the activity at hand. Students create a three-column chart, with headings referring to “what I know about the topic” (the K), “what I want to know or learn” (the W), and “what I learned” (the L). In this thinking and organizing strategy, developed by Ogle (1986), students activate their prior knowledge, set a purpose and goals for reading, and summarize what they have learned (p. 566). While originally conceived as a pre-reading activity which helps young students focus on reading comprehension skills and as a reflection on how reading helps them learn, this activity can also be used to focus learners on processes and content.

Instructors can gather information quickly about the learners in front of them by leading students through a KWL focusing activity about Google. The strategy would be especially useful in university bibliographic instruction situations where the librarian did not know the students well or at all, or at the beginning of the school year for secondary, middle or elementary schools. At the beginning of the lesson, students of any age could create their three-column chart on paper or type it in a spreadsheet, and then write about what they know and want to learn about Google, initially filling in the first and second columns.

More experienced searchers may have to be prodded to “think out of the box” and generate something that they would want to learn about searching with Google; of course, “I don’t need to learn anything because I know it all” will have to be pointed out as an unacceptable answer! Bell (2007) explains that many students suffer from “IAKT” syndrome, in which they complain “I Already Know That!” In cases like this, active learning and live search demos are the main way to combat student misunderstanding of library resources or overestimation of their searching abilities (p. 99).

Librarians who begin instruction sessions on a Google screen implicitly acknowledge student users’ prior experience. None of us would be very believable if we told students that their current use of Google or any other search engine was somehow “wrong.” Current student search practices should be elicited and discussed, but not in a negative way, due to the risk of “turning off” your captive audience in the first five minutes of a bibliographic instruction session. In complimenting students on what they know and know how to do, librarians could easily grow rapport with a class of students and simultaneously extend their knowledge base about online searching.

For example, when asking students for keywords to type into Google for a particular project at hand, the librarian could easily demonstrate Google’s advanced search functions like quotation marks and domain limits. Rather than biting our tongue and saying, “I wouldn’t type that word in because it doesn’t describe your topic,” we could elicit synonyms from the crowd, pass around some thesauri or encourage use of dictionary.com if in a computer lab. What may have seemed like a “wrong answer” from students in the past really just provides examples for the librarian to use. All answers, however off-base, should be acknowledged as contributions much in the same way that they are in social networks online. Correct answers will surface either from peer pressure or sheer numbers in agreement, and the peer-to-peer modeling

which may ensue will then be worth any initial wait time. Helping students get better at using Google is still improved information literacy.

Librarians and Learners

Bell (2007) explains that in a group bibliographic instruction session, choosing random or even volunteer students to help display their searching expertise for the class is risky in some ways, especially if the student is unable to follow directions properly or think in front of the group (p. 99-100). But this technique may help to combat student boredom and encourage peer critique. While a "librarian versus student showdown at the podium" is always a possibility, especially if the student cannot perform the actions possibly required of him/her, a limited amount of control and knowledge of a student group's personality can improve this type of activity and yield successful results (Bell, p. 102).

Like Bell, Hearn (2005) has experienced the benefits of embedding a librarian in the classroom, so that assignments and projects can be developed with higher-order thinking skills in mind and then co-graded as a natural practice. Perhaps a strategy such as this might help drive students and instructors toward activities that do not yield a simple "Google-able" answer. In a more controlled learning environment, or one with less experienced searchers, teachers and librarians can design an exercise for which answers are solely available in library databases. This instantly increases the value of library-specific resources in students' eyes, and will provide early and frequent success in guided practice and independent practice alike. While students may complete their required tasks successfully, these types of activities may seem too "school-like" rather than being based on student-generated information needs.

However, programmed lessons may not be the best way to teach students about all of the information sources available to them and how to marshal the appropriate sources to answer their information needs. Ill-structured problems, of the type described by Fields (2006),

may be the best way to develop expertise in students that is simultaneously deep and wide. Messy, complex issues with multiple starting points and various paths to solutions create a challenging, interdisciplinary scenario for learning while also providing a foundation for reflective thinking (Fields, p.418). If learning exercises mimic the complexities of real-world problems, or ideally are real-world problems themselves, the age-old challenge of transferring knowledge from 'formal school learning' to 'authentic lifelong learning' can occur more readily.

Problem-based learning as an educational approach also points toward these strategies. Vygotsky's concept of students' zone of proximal development (ZPD) helps us understand the point at which students can learn most or, in other words, the range of difficulty they are willing to tolerate with the least amount of frustration and the greatest amount of learning. As librarians guide students toward new sources or into more advanced search queries during the reference interview or in a class, they should be mindful of each student's ZPD. Information literacy instruction often naturally creates these conditions and environment, but library instructors may feel pressured to cover a certain amount of material in a limited time.

Specifically, this means not rushing ahead with an advanced concept before the learner is ready, since that advanced learning may only confuse them. For librarians, it may be difficult not to provide a student with a complex strategy to help answer their question. Some students may retain simpler instructions provided over time, rather than trying to copy a librarian's model of a detailed search technique that leads them directly to their answers but which they cannot replicate on their own. In any event, scaffolding and reaching the learner at his/her zone of proximal development creates momentum to learn more and can engage the student regardless of his/her ability level.

Taking Advantage of Google

Students can also learn to use Google to help them think in more complex ways and then use their new ideas to find better information within library resources. One strategy to achieve this is to use Google as a "keyword finder" for the topic at hand. By Googling several sequences of keywords in a row, and only looking at the keywords in the result list titles and brief descriptions, a searcher can sequentially narrow a topic or expand by utilizing synonyms or related terms quickly and easily. The ultimate list of terms describing the sought-after information can then be "plugged" into library database search boxes, thus resulting in more successful library searches with results that are closer to the student's intended topic.

Similarly, after students are permitted to "steal" a list of keywords from Google and type them into a library database search screen, they can also more easily see a parallel in "stealing" subject headings from the database itself. By comparing library subject terms to peer recommendations on websites or even folksonomy-type suggestion tags, librarians can not only help users see the value in an article's "subject tagging," but also help them recognize how databases and librarians can provide them with "tips" that work much better than the random keyword relationships most often generated by a search engine.

Another approach is to connect use of Google with complementary use of library resources. Students already know how to use Amazon to find newer books, so librarians could demonstrate Google Book Search as a complementary example for older books. Many books included in the Google Print scanning projects now also include a link to "where to find this item in a library." This redirection of students' attention back to the library as a key source for information in all formats is a connection that is important for students of all ages to make. Many colleges and universities are combining lesson and project revision with new instructional techniques in this same manner.

Google Scholar

Google Scholar also has the potential to make a variety of connections to online library resources. Libraries can connect their full-text journal and print holdings so that users can set a "preference" for their home university to appear whenever an item from a Google search is locally held. Since "full-text @ X Library" is an appealing one-click link, librarians can point this feature out to students and have them handily deposited into a library database as the ultimate destination. If Google leads them once again back to the library, then it may become increasingly clear that the library is where all the "good stuff" resides.

By helping students find famous authors on their intended topic or in their general field, Google thus points users back to resources where the author can be searched easily and a list of articles by that author, in reverse date order, can be found. "Cited by" features can help advanced users begin to understand citation schemes and authority within a discipline, and also assist novice users in finding articles on similar topics by chaining through results which cited their main author as evidence.

Conclusion

We recommend that those engaged in library instruction acknowledge student searching practices and extend them. Don't insult them for having inadequate or inaccurate understandings. Use what students know to generate a starting point and work from there. Use Google to engage and then activate prior knowledge for memory and internalization. Help users plan search strategy by identifying what they know and want to know. Show them how to formulate their own questions about search engine results by modeling. Show students how to generate questions which are answerable not by Google but by library databases. Help them generate meta-understandings of how information is organized instead of merely giving them enough skill to do the project at hand. Construct examples that favor Google for keywords and

library databases for scholarly treatments of those keywords. Show, don't tell. Give them the opportunity—using their own topic—to duplicate whatever it is you have just demonstrated.

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